

UNITED STATES PATENT AND TRADEMARK OFFICE  
**CERTIFICATE OF CORRECTION**

PATENT NO. : 6,829,183 B2  
DATED : December 7, 2004  
INVENTOR(S) : George M. Braceras

Page 1 of 11

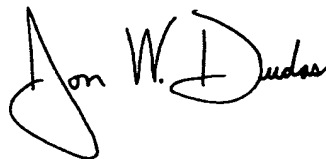
It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Delete the title page and substitute therefore the attached title page.

Delete Drawing Sheets 1-9 and substitute therefore the attached Drawing Sheets 1-9.

Signed and Sealed this

Thirty-first Day of May, 2005

A handwritten signature in black ink, appearing to read "Jon W. Dudas". The signature is stylized with a large, looping initial "J" and a distinct "D" at the end.

JON W. DUDAS  
*Director of the United States Patent and Trademark Office*

(12) **United States Patent**  
**Braceras**

(10) Patent No.: **US 6,829,183 B2**  
(45) Date of Patent: **Dec. 7, 2004**

(54) **ACTIVE RESTORE WEAK WRITE TEST MODE**

(58) Field of Search ..... 365/201, 200,  
365/230.06, 185.09, 185.2, 210

(75) Inventor: **George M. Braceras, Essex Junction, VT (US)**

(56) **References Cited**

(73) Assignee: **International Business Machines Corporation, Armonk, NY (US)**

**U.S. PATENT DOCUMENTS**

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(21) Appl. No.: **10/665,254**

\* cited by examiner

(22) Filed: **Sep. 20, 2003**

*Primary Examiner*—Connie C. Yoha

(65) **Prior Publication Data**

(74) *Attorney, Agent, or Firm*—Robert A. Walsh

US 2004/0062105 A1 Apr. 1, 2004

**Related U.S. Application Data**

(57) **ABSTRACT**

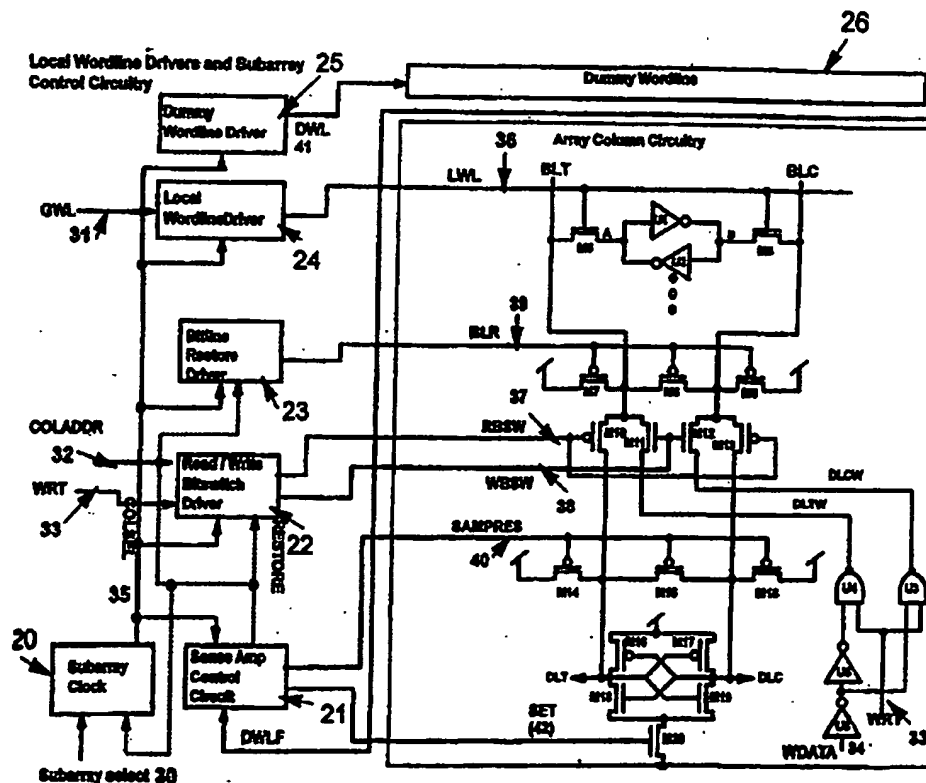
(62) Division of application No. 10/064,568, filed on Jul. 26, 2002, now Pat. No. 6,711,076.

A semiconductor memory device having an active restore weak write test mode for resistive bitline contacts. During the write margin test a circuit is used to block the bitline restore devices from turning off during the SRAM write cycle.

(51) Int. Cl.<sup>7</sup> ..... **G11C 7/00**

(52) U.S. Cl. .... **365/201; 365/200; 365/230.06; 365/185.09; 365/185.2; 365/210**

**4 Claims, 9 Drawing Sheets**

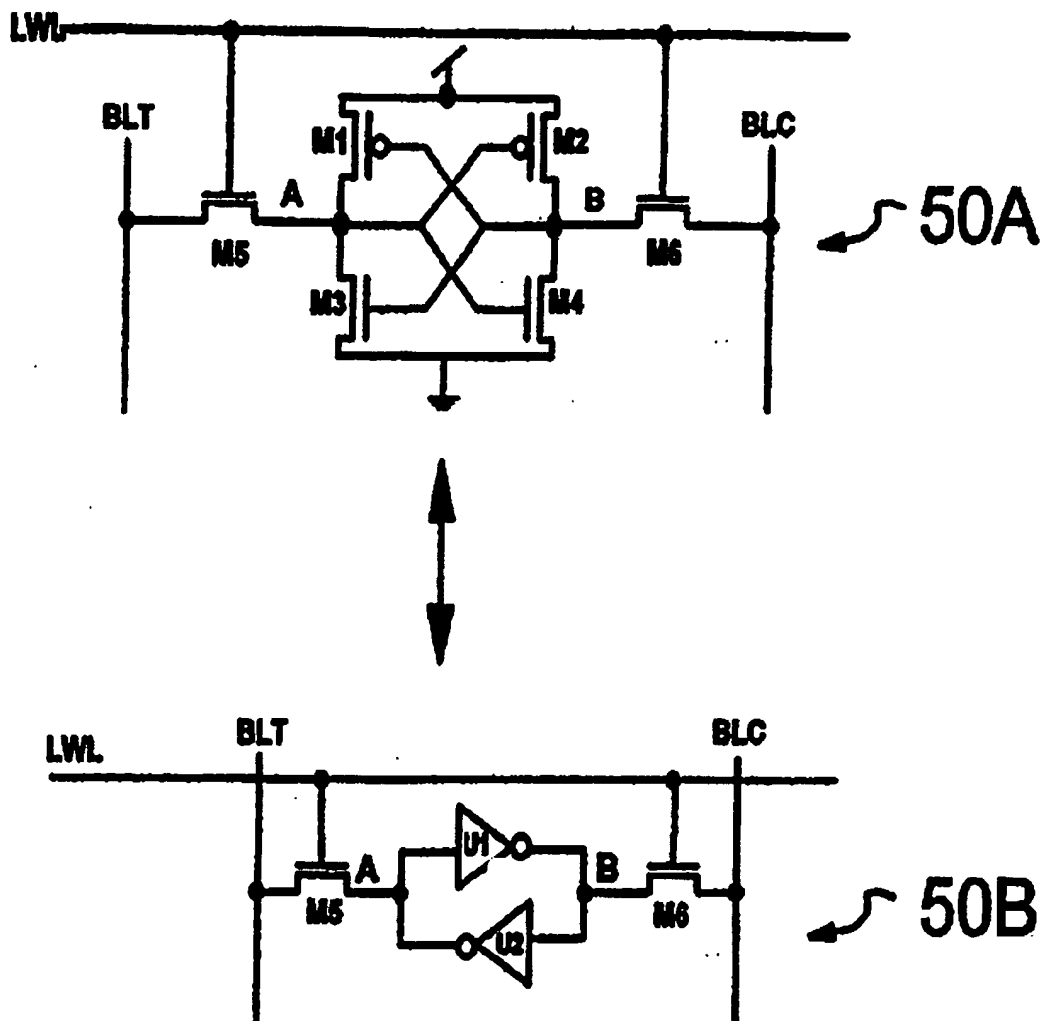


U.S. Patent

Dec. 7, 2004

Sheet 1 of 9

6,829,183 B2



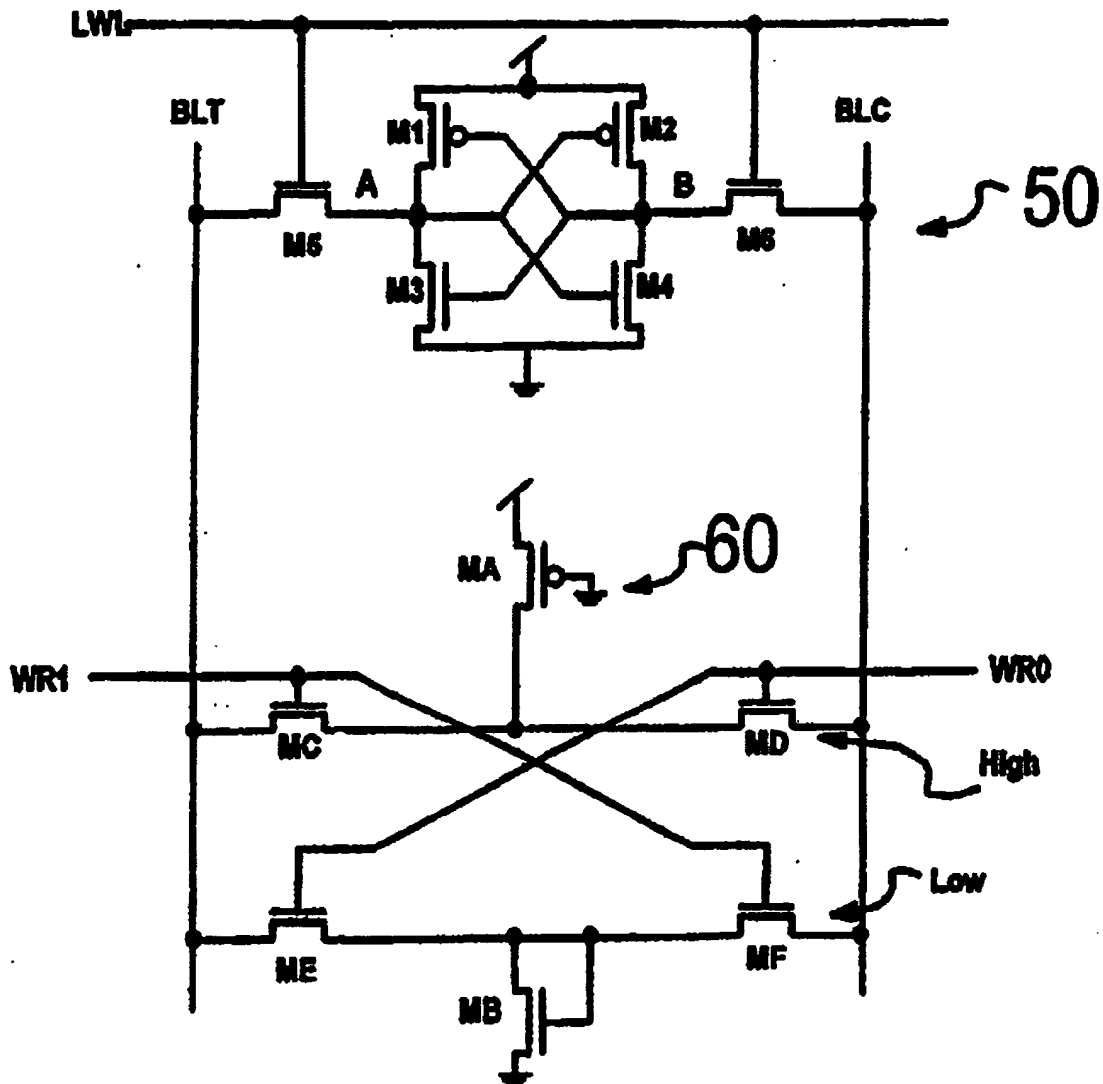
(Prior Art)  
FIG. 1A

U.S. Patent

Dec. 7, 2004

Sheet 2 of 9

6,829,183 B2



(Prior Art)  
FIG. 1B

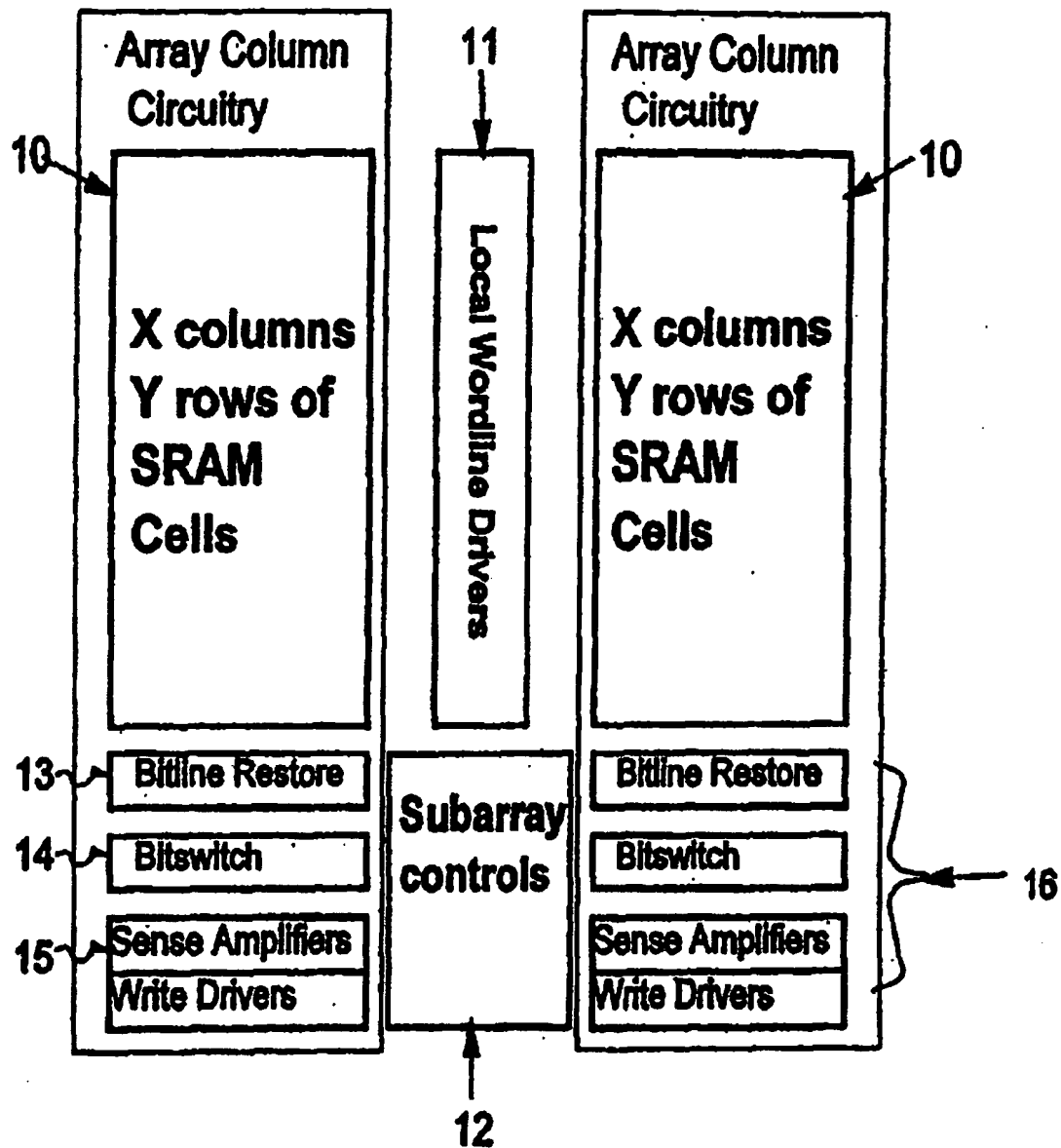
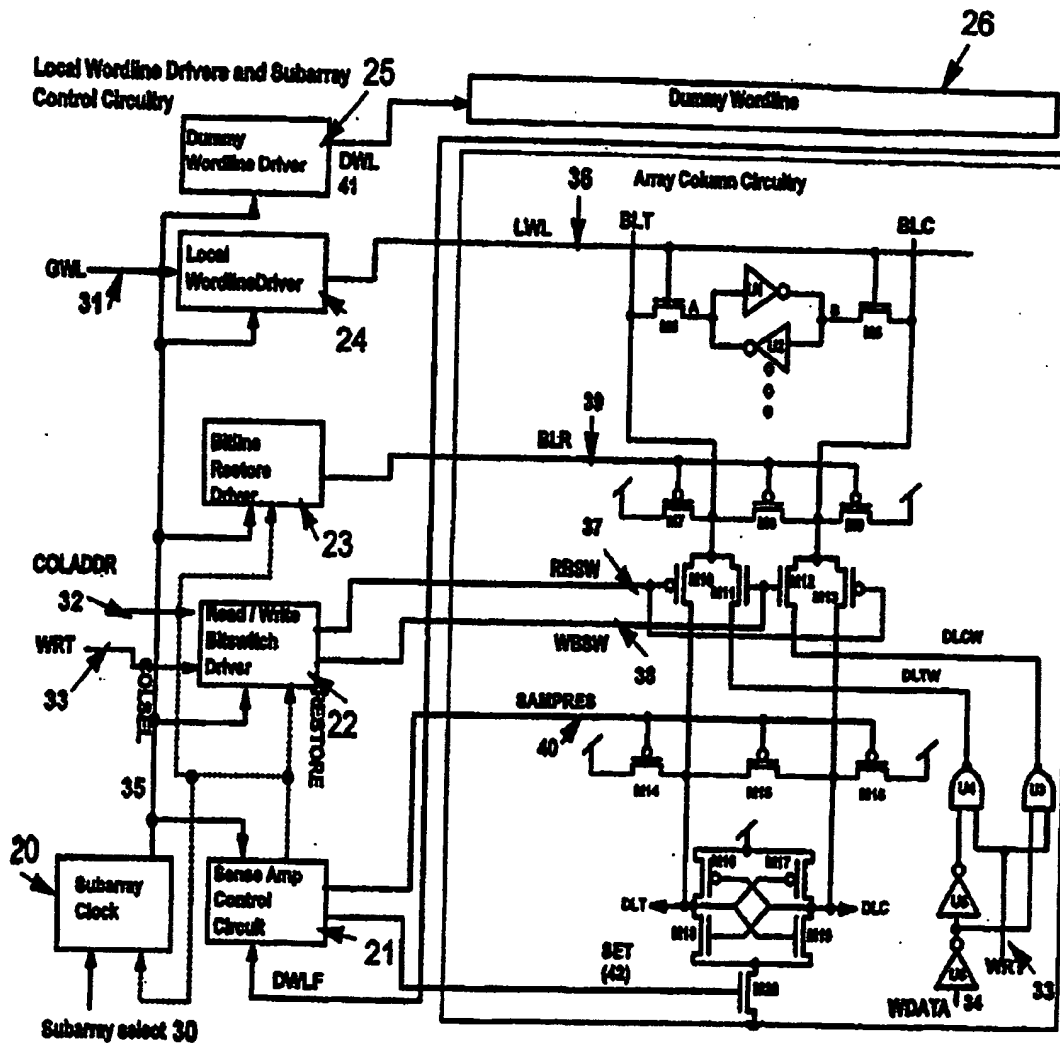


Fig. 2



(Prior Art)  
FIG. 3

U.S. Patent

Dec. 7, 2004

Sheet 5 of 9

6,829,183 B2

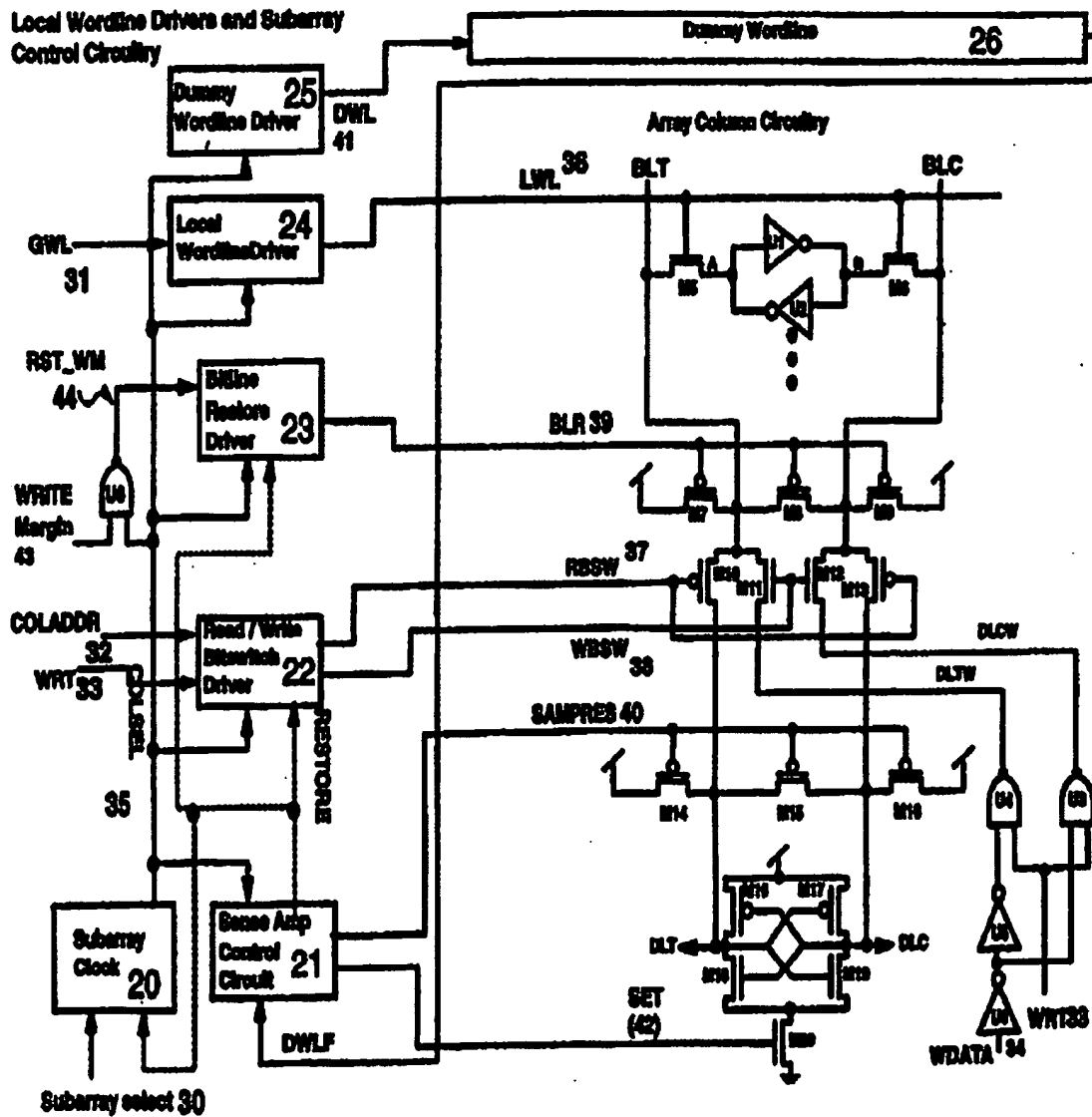
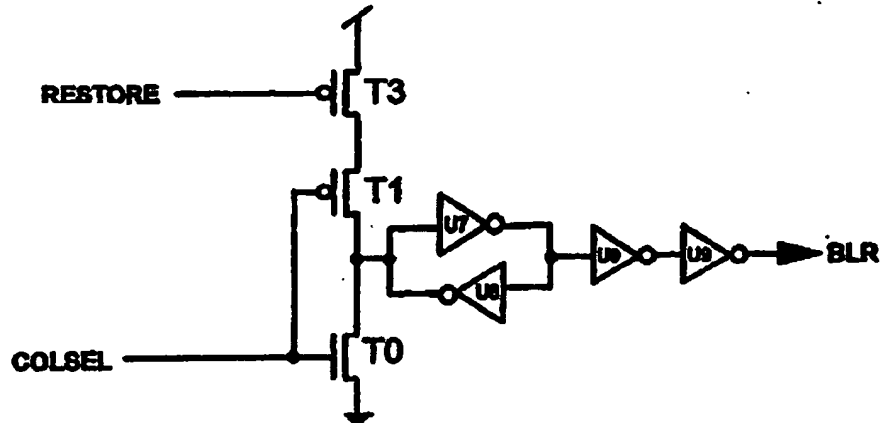
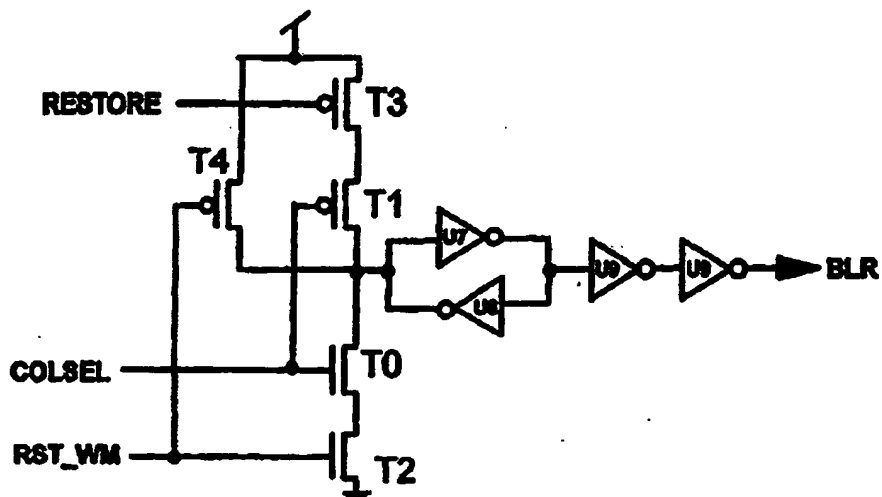


FIG 4



**(Prior Art)**  
**FIG 5A**



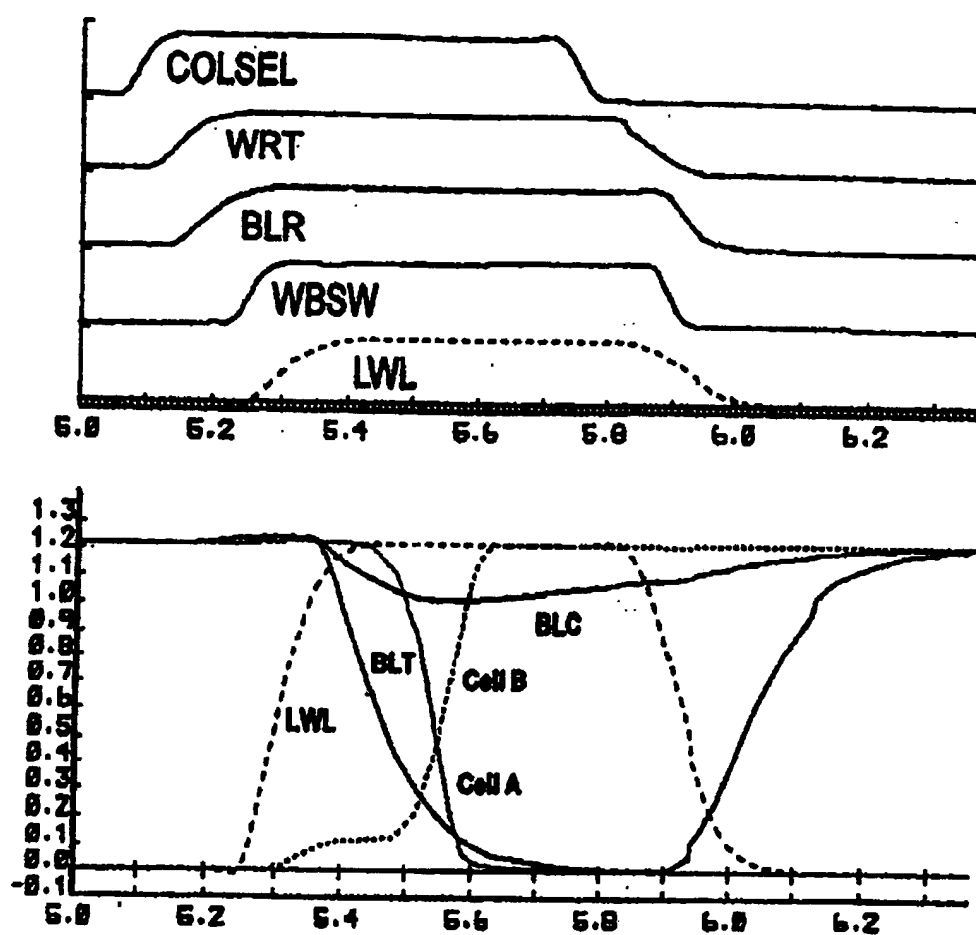
**FIG 5B**

U.S. Patent

Dec. 7, 2004

Sheet 7 of 9

6,829,183 B2



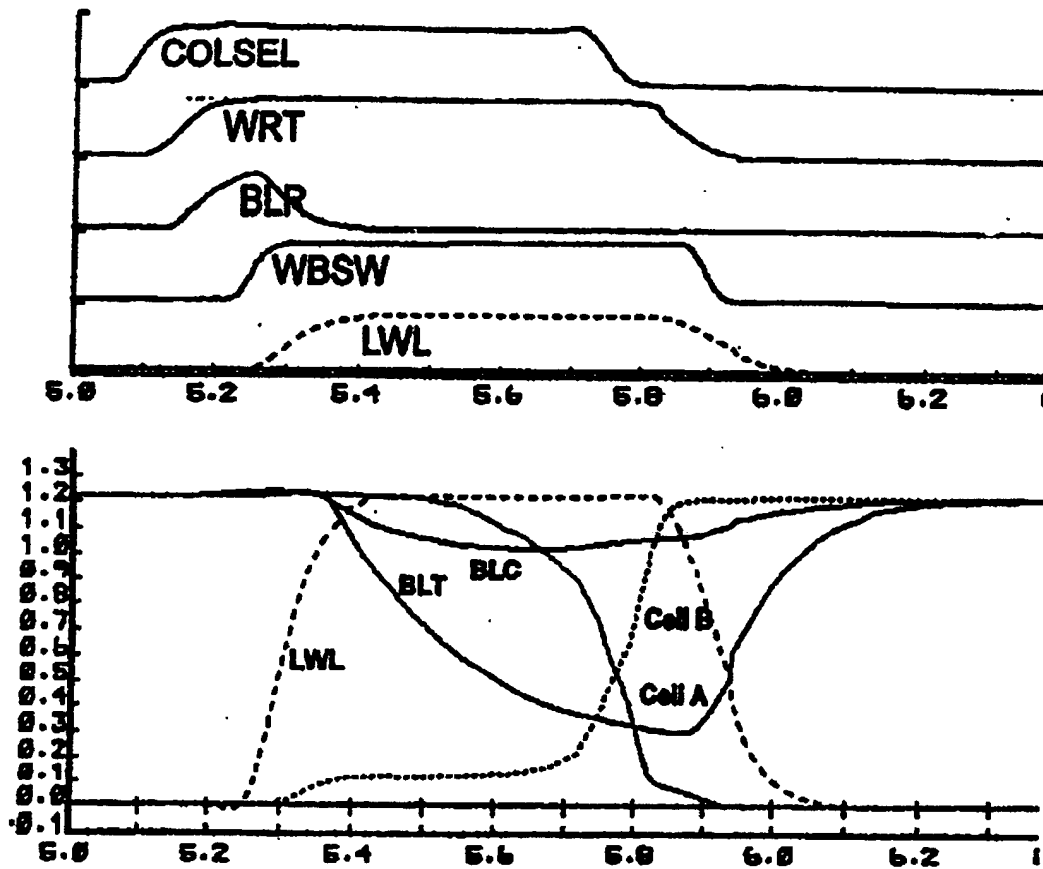
(Prior Art)  
**FIG 6A**

U.S. Patent

Dec. 7, 2004

Sheet 8 of 9

6,829,183 B2

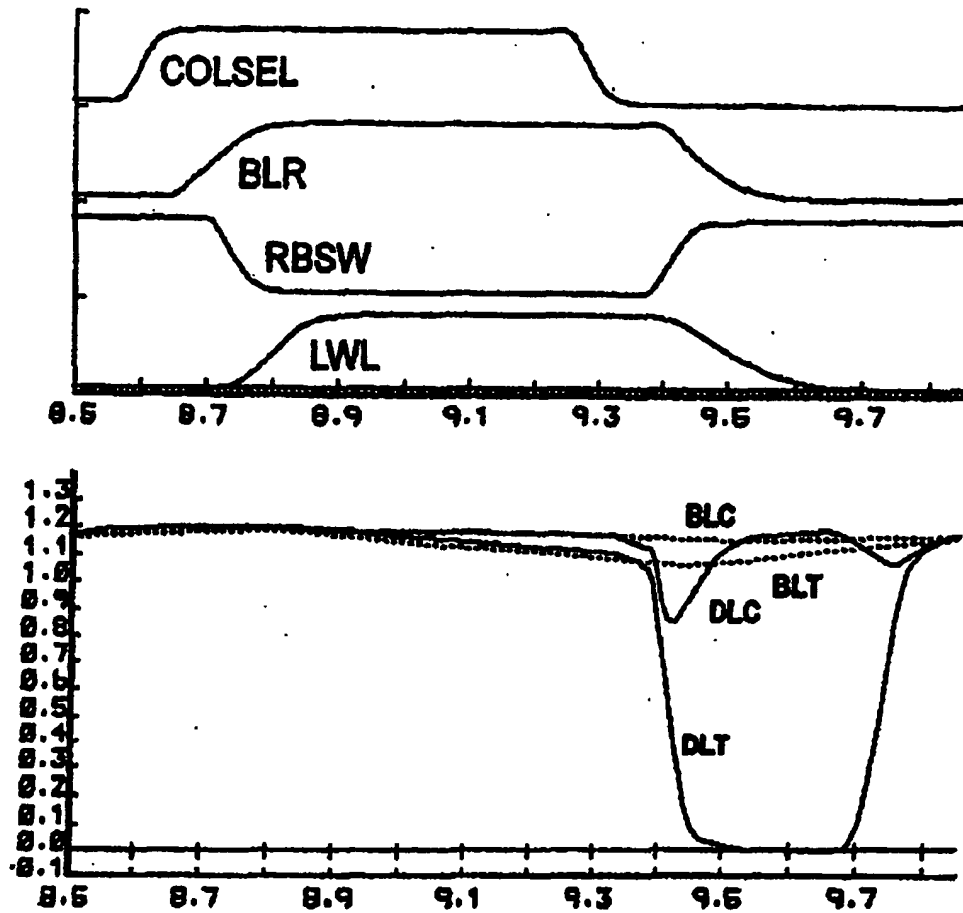
**FIG 6B**

U.S. Patent

Dec. 7, 2004

Sheet 9 of 9

6,829,183 B2



(Prior Art)

FIG. 6C